

Energy-efficient Building Control

close to you

green
by definition

The widespread demands to use less fuel, reduce CO₂ emissions and cut energy costs in buildings have a single solution: to apply energy-efficient building control.

Energy costs often exceed 25% of a company's overheads.

CentraLine building systems can help you control energy costs and reduce them – often by as much as 30%.

CentraLine is one of the fastest growing brands in the building controls industry. Established in 2004 by Honeywell as an independent brand for networked building automation, it has developed a Europe-wide infrastructure with 450 carefully selected and specially trained CentraLine PARTNERS.

CentraLine building systems are based on industry-leading technologies from Honeywell which are saving energy in over 150 million homes and 10 million buildings worldwide.

**CENTRA
LINE**
by Honeywell

Honeywell

“The building industry has the greatest potential for delivering greenhouse gas emissions cuts, at the least cost, using available and mature technologies.”

Building Management when everything fits

CentraLine provides custom-built solutions for office buildings, schools, retail premises, hotels, universities and many other buildings, of all sizes.

Our systems provide optimum operational performance and managed energy consumption without compromising comfort, thanks to cutting-edge application know-how and up-to-date control algorithms.

CentraLine is ideal for new-builds, upgrading existing installations and allows easy integration of third party products. Your investment in a CentraLine system is “future proofed”, because we apply open industry standards, such as BACnet and LONWORKS.

In addition, CentraLine keeps operating costs to a minimum through inspired solutions for onsite and remote service and monitoring.

Room Controls

Comfort and energy savings are assured by demand-led control of heating, ventilation and air conditioning (HVAC) systems, as well as of other building applications where appropriate.

Integration

CentraLine can seamlessly integrate systems including lighting, security, heating, ventilation, air conditioning, hotel reservations, ERP, and many others, providing huge potential for reducing energy and operating costs.

Building & Energy Management

Seamless monitoring of processes and energy consumption data across all applications allows strategies providing minimal energy use and lowest operating costs.

Plant Controls

Plant controls with smart energy saving functions respond to room controls, so heating and cooling energy is provided only when and where required for maximum energy savings.

Field Devices

We also consider all the unseen devices that must be carefully matched, expertly installed and perfectly configured to ensure smooth and optimum operation. Our large, high quality product portfolio includes valves, actuators, sensors, inverters and much more.

The largest potentials for energy savings can be exploited by e.g. optimizing the building envelope and by improving heating and cooling systems of buildings.

Room Controls close to nature

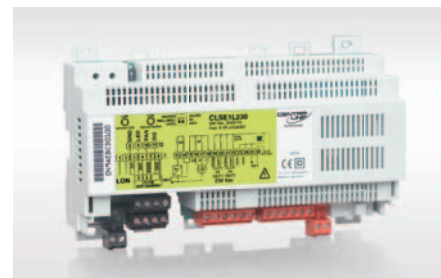
CentraLine's advanced room controllers achieve maximum comfort for minimum energy expenditure. They range from configurable dedicated products for Variable Air Volume and Fan Coil Units to freely programmable room controllers for specific applications.

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7

Example: Leading-edge technology

The control accuracy of our SERVAL room controller exceeded European standards by 400% when tested and certified by the European Building Automation and Controls Association (eubac).



Example: Integrated room control

CentraLine can integrate other room controls such as sun blind operation and lighting with the HVAC controls as part of a total strategy to maximise energy savings and comfort. CentraLine uses open systems standards and communication protocols such as LONWORKS and BACnet, so it can be used with products and systems from other manufacturers.



Example: Purely demand driven

The plant controllers commanding boilers and other sources of heating or cooling energy respond to room controls, to ensure energy is used only when and where needed:

- Schedules heat or cool rooms only when they are in use.
- Automatic optimization ensures that comfortable conditions are reached when the room is first used – not too early so energy is wasted.
- Presence sensors detect when rooms are occupied.
- Air quality or CO₂ room targets can be precisely met: supply air flow is optimised, electrical energy used by fans is reduced, and air heaters and coolers are run only as necessary. Variable fan speed control using CentraLine inverters saves energy.



Plant Controls where experience matters

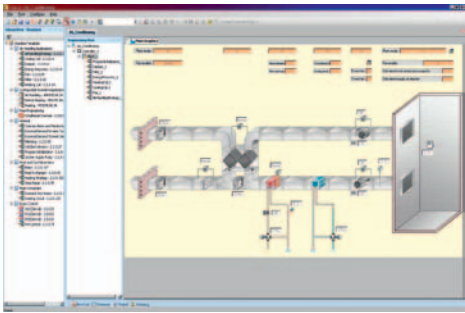
The latest intelligent plant control technology provides great potential to save energy. CentraLine offers a range of hardware and software, scalable from standalone to large networked installations.

All products employ Honeywell's latest technology which is already reducing operating costs in over five million buildings worldwide.

Example: Application expertise

CentraLine bundles its application know-how into COACH, an easy-to-use configuration software package. It provides highly-efficient and well-proven application expertise, patented control algorithms and cutting-edge software processes.

You therefore benefit from the latest energy management functions such as optimum start/stop, night purge, maximum load demand, self-learning algorithms and much more.



Example: Intelligent BACnet

EAGLE is an outstanding example of a future-oriented native BACnet® Building Controller (B-BC). It is freely programmable and offers perfect investment protection, as it communicates via industry standards BACnet IP, BACnet MS/TP, and LONWORKS®.

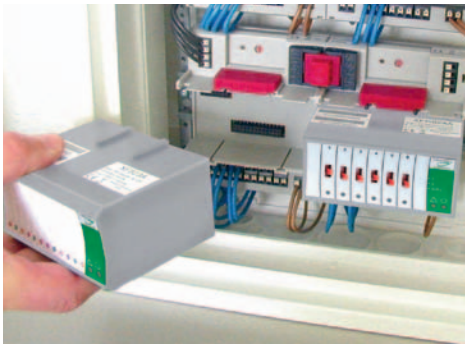
The integrated webserver replaces basic workstation functionality and allows remote operation and email alarming. Cost-effective installation is guaranteed through onboard I/Os and as EAGLE can be mounted in standard fuse boxes, on the wall or rail, as well as into cabinet doors.



Example: Smart maintenance

LION controllers feature a technically advanced, freely programmable control module and a set of specially designed input/output modules. Modules can be easily changed during servicing without disrupting the power and bus connections.

LION has many other patented features which simplify installation and commissioning, such as push-in wiring terminals, bridging connectors and cross connectors: wiring is therefore five times faster than standard systems with screw terminals.



Building & Energy Management under control

Clear monitoring of processes and of volume and energy flows is essential for applying optimisation strategies and to minimise running costs.

ARENA and ARENA^{AX} workstations allow you to monitor all your building management installations via a standard web browser, locally or remotely via the web.

On top, ENERGY MANAGEMENT ESSENTIALS is one of the most advanced web-enabled energy management suites available today.



Example: Energy management at its best

ENERGY MANAGEMENT ESSENTIALS is a web-enabled tool allowing you to monitor and optimize the energy consumption of your entire building.

- Optimize your energy patterns
- Select the best energy contracts
- Benchmark buildings and sites
- Identify anomalies in energy usage
- Raise awareness about energy usage and spend
- Reduce emissions



Example: Integrated building management

Our powerful, web-based ARENA^{AX} workstation can supervise HVAC and non-HVAC systems, such as lighting, sun blinds and security. This boosts overall energy efficiency. It enables you to manage your energy budgets, to benchmark facilities and to analyse rates for electricity, water, gas, and other utilities.



Example: Remote monitoring of existing installations

ARENA makes it easy to upgrade existing installations to use the latest web-based monitoring tools. It doesn't matter whether the workstation is located on site or remotely, or whether your installation connects to the web via a Local Area Network, modem or GPRS/UMTS: CentraLine has easy-to-apply solutions to provide clear and extensive monitoring to help make your buildings highly energy-efficient and comfortable.

Integration the big teamwork

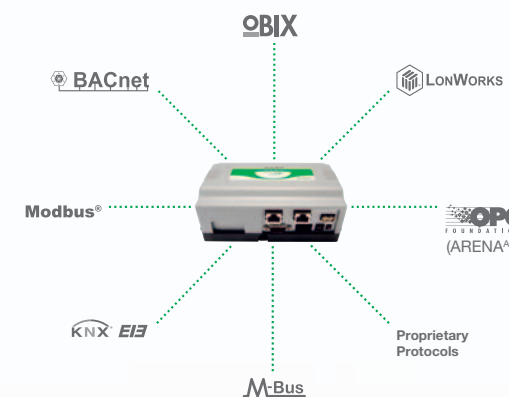
Example: Smart integration platform

HAWK is the smart and highly cost-effective CentraLine^{AX} integration controller. It is web-based, so also allows remote building management without the need for a PC.



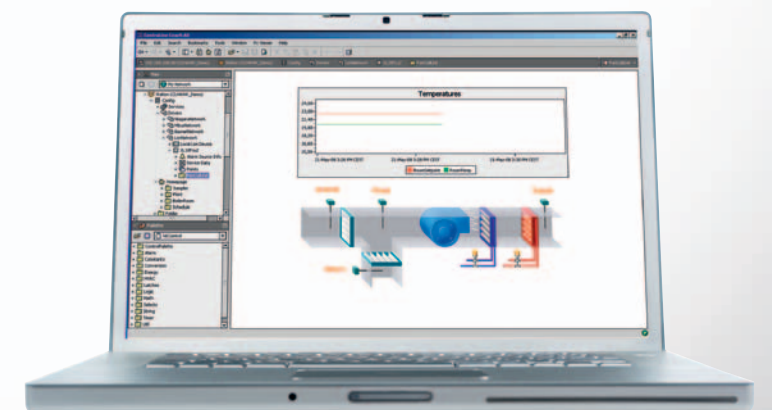
Example: Integration today

CentraLine^{AX} offers a single, smart integration platform, so avoids the enormous effort and cost necessary to link various systems via gateways. (note: a multitude of software drivers is available to integrate further protocols not shown below).



Example: Energy management and ERP integration

ARENA^{AX} provides high-end supervision functions, such as centralized data logging, archiving, alarming, real time graphical displays, master scheduling, system-wide database management, and integration with enterprise software applications.



Many buildings have several diverse systems operating in parallel, such as lighting, sunblinds, security, metering, heating, ventilation and air-conditioning. By operating independently and sometimes in conflict with each other, energy and management costs are often much higher than they need be.

Our web-based CentraLine^{AX} integration platform links these systems seamlessly. The energy consumption patterns of different applications can be clearly displayed and compared. Overall energy optimization strategies can be applied. This greatly reduces energy consumption and operating costs.

In addition, this data can be integrated into energy management programs and corporate applications such as accounting, service planning and maintenance.

Field Devices everything in the right place

Maximum energy savings in building control systems are dependent on many excellent components that work perfectly together.

CentraLine provides everything from input devices including thermostats and sensors (such as to detect presence, temperature, pressure, humidity and CO₂) to actuators and valves – as well as operating units and inverters.

This complete portfolio ensures overall high control accuracy through built-in energy saving features and seamless, problem-free integration within the system.



Examples: Precise sensing and metering

Precise data is essential to energy efficiency. CentraLine offers a huge range of sensors for temperature, humidity, air quality and pressure, as well as energy meters. All are designed specifically for HVAC applications and match the control system perfectly to provide precise HVAC control.

Example: Substantial energy savings through inverters

Using inverters to control the motor speed of fans and pumps is one of the easiest and most rewarding ways to provide energy savings as high as 70%.

Our HVAC and Compact range of inverters is especially designed for HVAC applications, so they are ideal for purpose, and very easy to install, commission and operate.

Example: Reliable valves and actuators for any requirement

The CentraLine and Honeywell ranges of valves and actuators are used already in over 150 million homes and buildings worldwide, making a valuable contribution to energy savings. They satisfy all requirements reliably and cost-effectively, for room, zone, radiator and ventilation applications. The range includes 2-, 3- and 4-way, linear, butterfly and rotary valves, with matching actuators.

The System powerful components

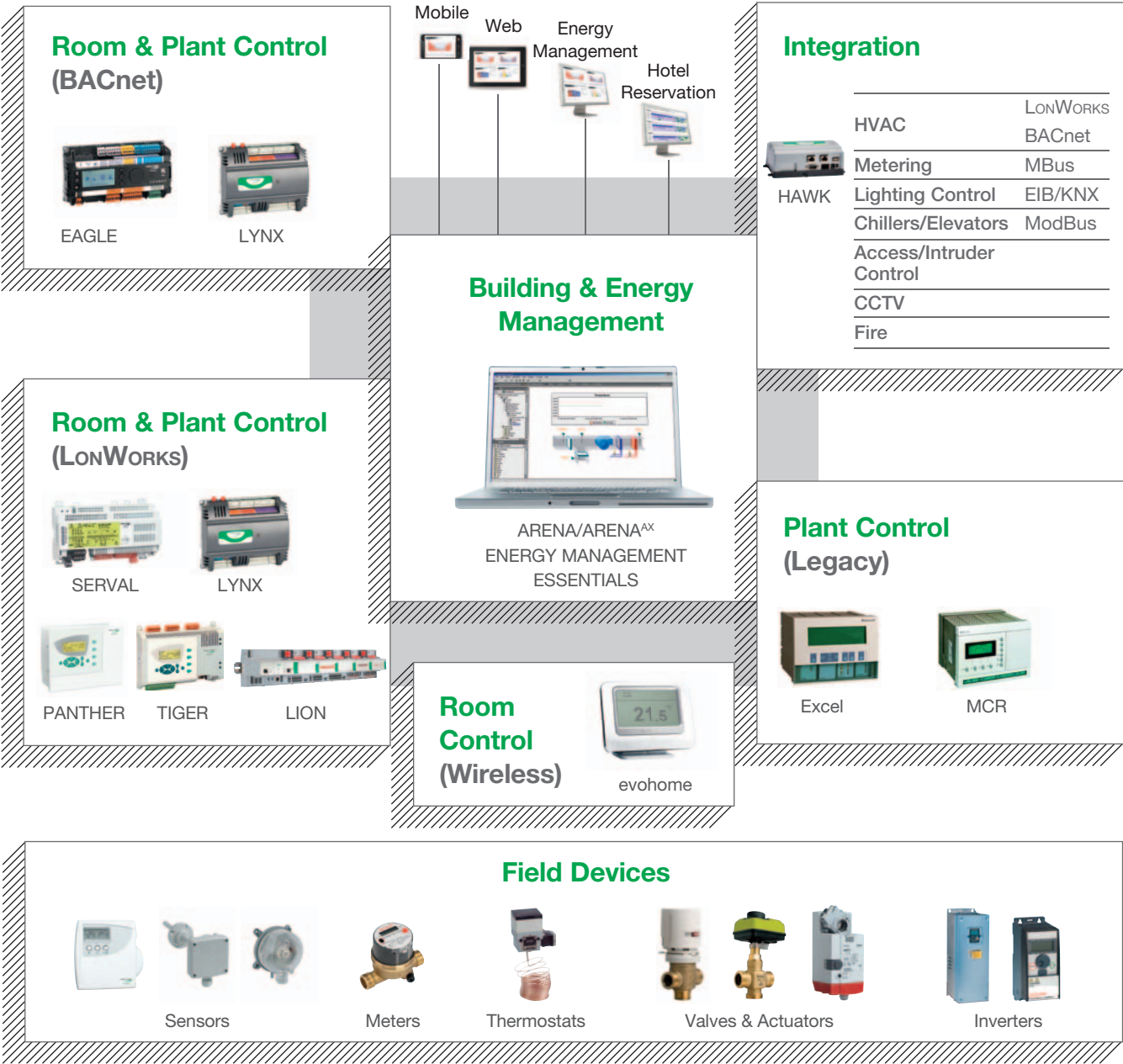
Centraline has a powerful solutions portfolio, backed by global Honeywell research and development resources. Its components can be matched to cover all your needs for HVAC control and overall building management.

Intelligent **building & energy management** provides single-point monitoring and control for all your installations, accessible on-site or remotely via web technology and mobile communicators.

In **room and plant control**, our high-performance control systems improve the indoor environment while cutting energy and equipment costs. Their inbuilt control schemes allow you to benefit from Honeywell's unrivalled applications expertise. As they use industry standards such as LonWorks and BACnet, a Centraline installation protects your investment and allows easy future system expansions and upgrades.

Centraline **integration** seamlessly links all your systems, from different vendors and with different protocols. You can easily monitor, automate and optimize metering devices, building or process controls, HVAC, lighting and much more. This enables great reductions in energy consumption and overhead costs. Furthermore integration with previous systems is provided, thus protecting your investments.

We offer a huge range of **field devices**, all designed to help maximise energy efficiency: valves, actuators, sensors, inverters and many more.



High energy performance
Advanced
Standard
Non-energy-efficient

BACS Energy Performance Classes – EN 15232

Centraline enables you to achieve BACS* Energy Performance Class A. In lecture rooms, for example, this offers an energy savings potential of up to 50%, compared with the standard.

(*BACS = Building Automation and Control System)

Customised solutions for your comfort and energy savings

Hospitals

CentraLine ensures a different, precisely controlled environment in each area to ensure the comfort of staff and patients, from waiting rooms to operating theatres, isolation wards to examination rooms. Different application protocols, such as LONWORKS, BACnet, Modbus and others, can be integrated, together with operational status and financial data: all can be accessed onsite and remotely.

Universities

Educational institutes offer huge potentials for energy optimization, such as time scheduling to match HVAC provision with individual room use and air quality, occupancy sensing, air quality optimized energy generation and distribution. Monitoring via CentraLine provides an excellent basis for improved control settings, yielding significant energy savings.

Medical and Health Centres

Sterile environments, laboratories and treatment rooms typically require specially filtered outside air, pressurised areas and rooms with specific environmental needs. Even when HVAC systems in these types of buildings have been sourced from different manufacturers using different communication protocols, CentraLine can link them seamlessly to ensure all the needs are met, highly energy efficiently.

Apartment buildings

These provide a vast potential to make energy savings while also enhancing comfort in each individual apartment. This is achieved through time scheduling, automatic system adjustments and programmable individual room controls. We can also integrate energy meters and provide energy monitoring via the Internet.

Offices

Employees are more productive when their workplace has a high quality ventilation system providing clean, fresh air without draughts. Energy efficiency can be greatly improved through intelligent time programs and occupancy sensors, and by controlling lights and blinds.

Schools

CentraLine allows each classroom to be assigned its own schedule that also considers the heat provided by other sources. Energy-efficient control systems ensure boilers and chillers are activated only when needed. Optimised ventilation controls can reduce energy consumption in sports halls and changing rooms by 30% to 50%, such as by introducing fresh air only when the CO₂ concentration has reached a specified level.

Retail outlets

CentraLine solutions integrate non-HVAC systems such as cooling and refrigeration devices into the energy optimisation process, regardless of system vendors and protocols. Exterior doors are equipped with air curtain systems and HVAC systems operate according to the number of people in the facility, without customers noticing any difference.

Hotels

Energy efficiency in hotels can be largely increased by linking the room reservation system to the HVAC installation, so that unoccupied rooms can be set to 'stand by' operation. Further major potential lies in precise air quality control, e.g. by supplying the optimum amount of fresh air and through the use of speed-regulated fans in conference rooms, wellness areas and restaurants.

Churches, museums and other public buildings

Special control techniques ensure visitors' comfort while protecting exhibits, artwork and the building fabric. This is all achieved energy efficiently and cost effectively.

Fitness Centres

Fitness centres place very high demands on comfort and energy efficiency, yet occupancy levels vary greatly. A variable fresh air supply is essential to ensure energy efficiency. Between 30% and 50% of energy can be saved if fresh air is supplied only when a specified CO₂ level is reached. CentraLine can provide HVAC control and smart field devices including air quality sensors and damper actuators, as well as inverters to vary fan speeds.

Centraline Partners the professionals 'close to you'

Centraline solutions are provided exclusively by PARTNER companies, carefully selected and specially trained by Centraline. They are established, highly experienced installers and system houses, which receive in-depth training and can use a comprehensive support infrastructure provided by Centraline, in person and using web technology.

The combination of a strong local presence and unrivalled expertise from a major company provides the best solution for you:

- One supplier for planning, installation, commissioning and service.
- Ideal, cost-effective solutions for every project, through helpful Centraline PARTNERS who work flexibly, efficiently and quickly.
- Innovative and forward-thinking product advancement from one of the world's leading building control providers.



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CONTACT

Find your nearest Centraline Partner
for expert advice on energy-efficient building control at:
centraline.com

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